



Australian Bureau of Statistics

6238.0 - Retirement and Retirement Intentions, Australia, Aug 2004 to Jun 2005

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Summary

Main Features

NOTES

ABOUT THIS PUBLICATION

This publication presents information about retirement and retirement intentions of people aged 45 years and over who have, at some time, worked for two weeks or more. The data examines retirement trends, factors which influence decisions to retire, and the income arrangements retirees and potential retirees have made to provide for their retirement. The data are cross-classified by a range of demographic characteristics such as age, sex, marital status and country of birth, as well as labour force characteristics.

The statistics in this publication were compiled from the retirement and retirement intentions topic included in the Multi-Purpose Household Survey (MPHS), conducted throughout Australia from August 2004 to June 2005 as a supplement to the Australian Bureau of Statistics (ABS) monthly Labour Force Survey (LFS). This topic will be repeated every two years. Retirement and retirement intentions data was previously collected on an irregular basis as part of the supplementary survey program. For details about comparability with previous surveys see paragraph 22 of the Explanatory Notes.

The other topics collected in the 2004-05 MPHS were:

- **Barriers and Incentives to Labour Force Participation, Australia** (cat. no. 6239.0), released on 6 February 2006.
- **Household Use of Information Technology, Australia** (cat. no. 8146.0), released 15 December 2005.

DATA NOTES

The MPHS was designed primarily to provide estimates at the Australia level. Broad estimates are also available for states and territories, although users should exercise caution when using estimates at this level, because of the presence of high sampling errors.

Estimates in the electronic tables have been presented to the nearest 100, but the underlying numbers have been set at six decimal places to allow users the flexibility to calculate proportions or to aggregate estimates. Users should take note of the corresponding Relative Standard Errors (RSEs) to determine the reliability of the estimates and whether they are appropriate to use. For further information about the reliability of estimates see paragraph 13 of the Explanatory Notes. For details about how to calculate RSEs for estimates that have been aggregated see paragraphs 9 to 15 of the Technical Note.

ROUNDING

As estimates have been rounded, discrepancies may occur between sums of the component items and totals.

INQUIRIES

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070 or Labour Market Statistics Section on Canberra (02) 6252 7206.

SUMMARY COMMENTARY

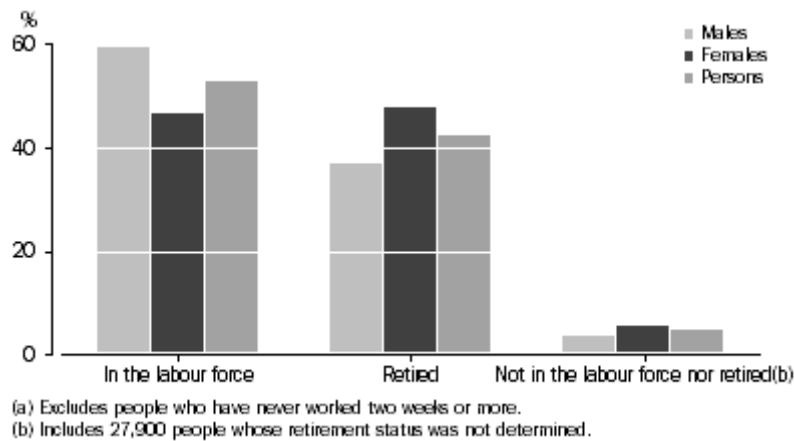
SUMMARY OF FINDINGS

OVERVIEW

Since 1995, Australia's estimated resident population aged 45 years and over has increased by 30%. In contrast, the number of children (aged 0 to 14 years) has increased 2.3%, and the number of people aged 15 to 44 years has increased 4.8%¹. This uneven distribution of growth reflects the gradual ageing of Australia's population, which inevitably impacts on labour market supply, retirement and income support policies.

Data from the 2004-05 Multi-Purpose Household Survey (MPHS) showed that of the 7 million people aged 45 years and over who had, at some time, worked for two weeks or more, 3.7 million (53%) were in the labour force, 3 million (42%) had retired from the labour force, and the remaining 329,900 (4.6%) were neither in the labour force nor retired (consisting of people who intended to work in the future or whose retirement status was not determined). A greater proportion of men were in the labour force (59%), than women (47%).

Labour force status of people aged 45 years and over(a), by sex



Of the 3.7 million people in the labour force, 3.4 million (90%) indicated that they intend to retire from the labour force in the future, while 384,400 (10%) never intend to retire.

RETIRED FROM THE LABOUR FORCE

In 2004-05, an estimated 3 million people aged 45 years and over were retired from the labour force. This group comprised 1.3 million men (44%) and 1.7 million women (56%). Almost half of the retired people were aged 70 years and over (52% of men and 47% of women).

Age at retirement

The average age at retirement from the labour force for people aged 45 years and over in 2004-05 was 52 years (58 years for men and 47 years for women). Of the 1.3 million men who had retired from the labour force:

- 19% had retired aged 65 years and over;
- 55% had retired aged 55-64 years;
- 18% had retired aged 45-54 years; and
- 7.8% had retired aged less than 45 years.

The 1.7 million women who had retired from the labour force tended to retire earlier than men. The ages that they retired from the labour force were as follows:

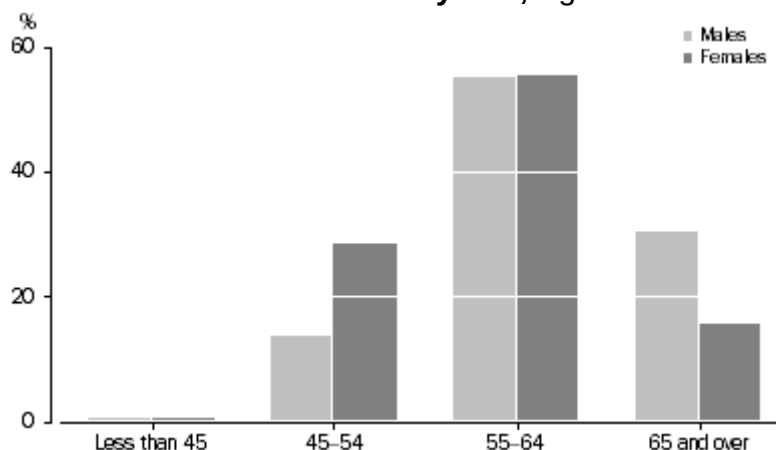
- 6.0% had retired aged 65 years and over;
- 32% had retired aged 55-64 years;
- 29% had retired aged 45-54 years; and
- 33% had retired aged less than 45 years.

It is important to note that data on retirement age presented in this publication only refer to 'surviving' retirees aged 45 years and over in 2004-05. Therefore, the distribution of retirement age in this population is not representative of the age at which people retire. For example, based on Australian life expectancy, a person who retired aged 40 years in 1979-80 (aged 65 years in 2004-05) would more likely be alive to participate in this survey than a person who retired aged 65 years in 1979-80 (aged 90 years in 2004-05). This effect

will be more pronounced for estimates presented in relation to people who retired a long time ago, but will have some affect on all estimates, particularly as almost 35% of the retired population included in this publication retired more than 20 years ago.

The average age at retirement for recent retirees (those who retired in the last five years) was 60 years. Of this group, the difference between the retirement age of men and women was relatively small, with women retiring approximately three years younger than men (the average retirement age for men was 61.5 years for men and 58.3 years for women).

People who retired in the last five years, Age at retirement by sex



Reasons for ceasing last job

Of the 1.9 million retired people who had worked in the last 20 years, 95% (99% of men and 89% of women) had held a full-time job at some stage. For most people who had held a full-time job (76%), their last job held prior to retirement was full-time. The remainder of people (24%) worked part-time before retiring and were mostly women (72%).

Among both retired men and women whose last job was less than 20 years ago, the main reason for ceasing their last job was due to 'reaching retirement age/being eligible to receive superannuation or the pension' (34%). These people had one of the highest average retirement ages of 62 years, which reflects ages of eligibility to receive such retirement scheme funds. Other reasons that people ceased their last job were due to 'sickness, injury or ill health' (26%) and 'being retrenched, dismissed or no work available' (11%).

Sources of income during retirement

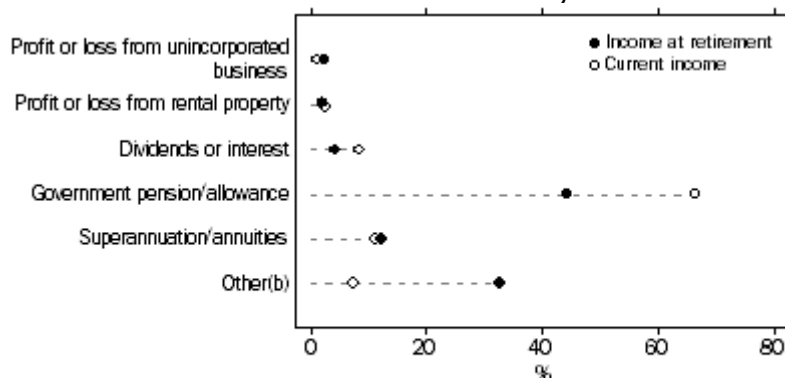
Of people aged 45 years and over who had retired from the labour force, just over 1.3 million people (44%) reported a government pension or allowance as their main source of income just after retirement (54% of men and 37% of women). A further 384,700 people (13%) reported no income source but lived off savings, lump sum payments or other assets, and 366,700 people (12%) reported superannuation or annuity payments (20% of men and 6.3% of women).

Forty-two per cent of those retired from the labour force indicated that their main source of income had changed since retirement. There were almost 2 million people (67% of all those who were retired) who reported that their main source of current income was a government

pension or allowance, representing an increase of 50% compared with the number of people who stated it as their main source of income at retirement. This may be due to people reaching the eligible age to receive a pension or allowance during their retirement rather than at the start of their retirement, or due to assets or other sources of income being exhausted.

A large proportion of people whose main source of income at retirement was 'superannuation/annuities' or 'profit/loss from rental properties' continued to rely on them as their main source of current income (67% and 66% respectively).

People who have retired from the labour force, Main source of income(a)



(a) Excludes 'did not know' and 'not stated/not determined'.

(b) Includes people with no income, e.g. living off assets, other assets or partner's income.

Superannuation scheme membership

Of the 2.3 million people who retired from the labour force when they were aged 45 years or over, 1.3 million (55%) had made contributions to a superannuation scheme at some stage. Of this group, 842,500 people (or 66%) had received all or part of their superannuation funds as a lump sum payment. Many of those who received a lump sum payment used it to pay off or improve their existing home or purchase a new home (31%), to buy or pay off a motor vehicle (14%), or clear other outstanding debts (11%). Some reinvested their lump sum payment into an approved deposit fund, deferred annuity or other superannuation scheme (22%), an immediate annuity (2.1%), or a bank account, personal savings or other investment (23%).

PREVIOUSLY RETIRED

There were 209,900 people aged 45 years and over who had previously retired from the labour force but at survey date were either in the labour force or planning to look for, or take up, work in the future. Most of this group were women (149,000 or 71%), and most were in the labour force at survey date (186,200 or 89%). Of those employed, 58% (or 106,600 people) were working part-time.

The most common reason for returning to the labour force was due to financial need (45%), followed by boredom or needing something to do (36%).

INTENTIONS TO RETIRE FROM THE LABOUR FORCE

Of the 3.7 million people in the labour force aged 45 years and over, 3.4 million (90%) indicated that they intend to retire from the labour force in the future. The remaining 384,400 people indicated that they never intend to retire from the labour force.

Age intends to retire

Of the 3.4 million people in the labour force who indicated that they intend to retire from the labour force, almost half (47%) did not know at what age they would retire. Of those that did indicate an age:

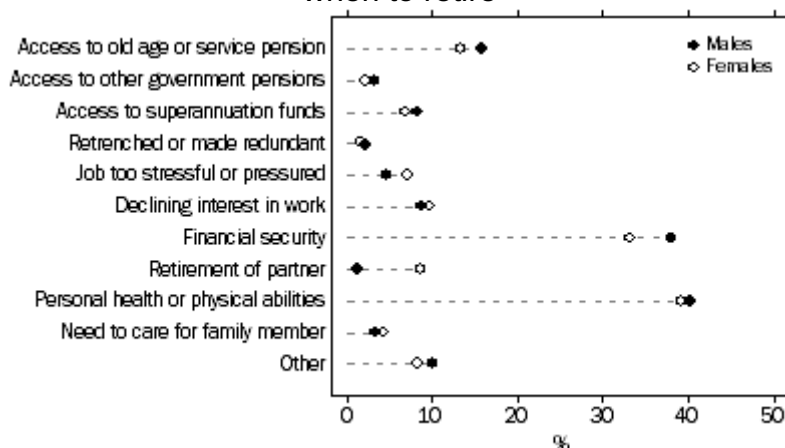
- 8.4% intended to retire aged 70 years and over (10% of men and 6.2% of women);
- 39% intended to retire aged 65-69 years (46% of men and 30% of women);
- 31% intended to retire aged 60-64 years (30% of men and 33% of women);
- 19% intended to retire aged 55-59 years (14% of men and 27% of women); and
- 2.3% intended to retire aged less than 55 years (1.1% of men and 4.1% of women).

The average age people intended to retire was 62 years (63 years for men and 61 years for women).

Factors influencing decision about when to retire

Among people in the labour force who intended to retire, the most common factors influencing their decision about when they would retire were personal health or physical abilities (40%), financial security (36%) and reaching the eligible age for an old age or service pension (15%).

People in the labour force who intend to retire, All factors influencing decision about when to retire

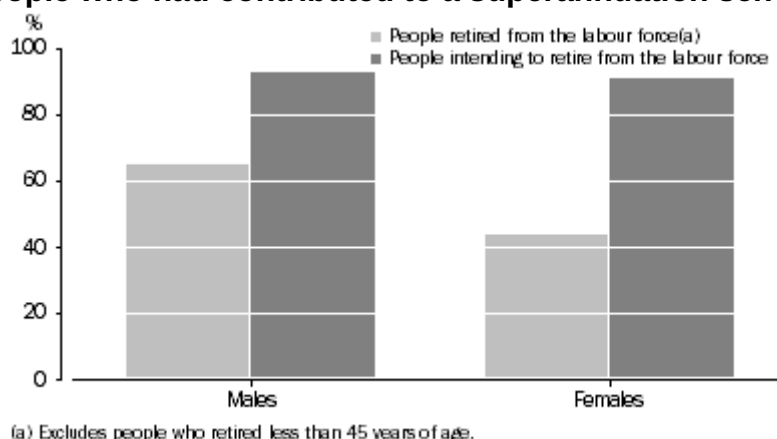


Expected main source of income at retirement

People in the labour force aged 45 years and over who intended to retire showed different responses from the retired group regarding their main (expected) income source at retirement. Many retired people reported a government pension or allowance (1.3 million people or 44%), whereas only 854,300 people (or 25%) reported a government pension or allowance as their main expected source of income at retirement. This group had the

highest intended age of retirement (64 years), which reflects the age of eligibility to receive pensions such as the Australian Age pension. Many people intending to retire reported superannuation or annuity (1.4 million people or 41%) as their expected main source of income at retirement. The prevalence of superannuation or annuity as the expected main source of income at retirement is consistent with the increase in the number of people participating in superannuation schemes. Over 90% (or 3.1 million) of people intending to retire indicated that they had contributed to a superannuation scheme at some time, compared with 55% of people who had retired from the labour force when they were aged 45 years or over. Such trends reflect changes to superannuation legislation over the last two decades, in particular the Superannuation Guarantee Charge Act, introduced in 1992, which requires employers to make superannuation contributions for all employees earning \$450 or more a month.

People who had contributed to a superannuation scheme



¹Based on preliminary 2005 estimates. Source: **Population by age and sex, Australian States and Territories, June 2005** (cat. no. 3201.0).

About this Release

This publication presents information on retirement for people aged 45 years and over. For those who are still in the labour force, information is available about current job and retirement intentions. For those people who are not in the labour force, data items include age at retirement; reason retired; income sources in retirement, and use of any lump sum payments.

Data for November 1994 are available as a standard data service (6238.0.40.001).

Over 40% of people aged 45 years and over are retired from the labour force (Media Release)

MEDIA RELEASE

Over 40% of people aged 45 years and over are retired from the labour force

There are 7 million people aged 45 years and over who have worked at some stage, of which 3 million have retired, according to new figures released by the ABS.

Retirees

There are 3 million retirees aged 45 years and over in Australia. At retirement, the main source of income for almost half (44%) of these people was a 'government pension or allowance'. Slightly more women (1.7 million) than men (1.3 million) are retired.

Most of the 3 million retirees (63% or 1.9 million) had worked in the last 20 years. Just over one-third (34%) of people who had retired in the last 20 years (and who were in the population in 2004-05) ceased their last job when 'reaching retirement age or being eligible to receive superannuation or the pension', while over one-quarter (26%) retired due to 'sickness, injury or ill health' and 11% retired due to 'being retrenched, dismissed or no work available'.

Retirement intentions

There are 3.7 million people aged 45 years and over who are currently in the labour force. While the majority (90%) of these people said they intended to retire, only slightly more than half (53%) have decided when this would be. Men intend to retire on average at 63 years compared to 61 years for women.

Two out of five people (40%) said their 'personal health or physical abilities' would influence their decision to retire. Other influencing factors were 'financial security' (36%) and 'reaching the eligible age for an old age or service pension' (15%).

Many of the 3.4 million people who intend to retire expect their main income source at retirement to be 'superannuation or annuity' (41%), followed by 'government pension or allowance' (25%). The prevalence of 'superannuation or annuity' as the expected main source of income at retirement is consistent with the changes in superannuation legislation over the last two decades and the increase in the number of people participating in superannuation schemes.

Further details can be found in **Retirement and Retirement Intentions, August 2004 to June 2005** (cat. no. 6238.0), available free of charge.

Note: This survey was conducted from August 2004 to June 2005 and relates to people aged 45 years or over who have, at some time, worked for two weeks or more. It is important to note that the data from this survey only refer to 'surviving' retirees aged 45 years and over. For example, the distribution of retirement age in this population is not representative of the age at which people retire.

Explanatory Notes

Explanatory Notes

EXPLANATORY NOTES

INTRODUCTION

1 These Explanatory Notes contain information about two publications, **Barriers and Incentives to Labour Force Participation, Australia** (cat. no. 6239.0) and **Retirement and Retirement Intentions, Australia** (cat. no. 6238.0). The statistics presented in both publications were compiled from data collected in the inaugural Multi-Purpose Household Survey (MPHS) that was conducted throughout Australia from August 2004 to June 2005 as a supplement to the Australian Bureau of Statistics (ABS) monthly Labour Force Survey (LFS). In future years, the survey will be conducted over the full financial year. The MPHS was designed to provide statistics annually for a small number of labour, social and economic topics. The topics collected in 2004-05 were:

- Barriers and Incentives to Labour Force Participation
- Retirement and Retirement Intentions
- Household Use of Information Technology

2 For all topics, information on labour force characteristics, education, income and other demographics are also available. In addition to these publications, data from 2004-05 MPHS will also be released as an expanded Confidentialised Unit Record File (CURF) in 2006.

3 The publication **Labour Force, Australia** (cat. no. 6202.0) contains information about survey design, sample redesign, scope, coverage and population benchmarks relevant to the monthly LFS, which also applies to the MPHS. It also contains definitions of demographic and labour force characteristics, and information about telephone interviewing relevant to both the monthly LFS and the MPHS.

CONCEPTS SOURCES AND METHODS

4 The conceptual framework used in Australia's LFS aligns closely with the standards and guidelines set out in Resolutions of the International Conference of Labour Statisticians. Descriptions of the underlying concepts and structure of Australia's labour force statistics, and the sources and methods used in compiling these estimates, are presented in **Labour Statistics: Concepts, Sources and Methods** (cat. no. 6102.0.55.001) which is also available on the ABS web site (Methods, Classifications, Concepts & Standards).

COLLECTION METHODOLOGY

5 ABS interviewers conducted personal interviews by either telephone or at selected dwellings during the period August 2004 to June 2005. Each month a sample of approximately 1,650 dwellings were selected for the MPHS from the responding households in the LFS. In these dwellings, after the LFS had been fully completed for each person, a usual resident aged 18 and over was selected at random and asked the additional MPHS questions in a personal interview. Information for this survey was collected using Computer Assisted Interviewing (CAI), whereby responses are recorded directly onto an electronic questionnaire in a notebook computer.

SCOPE

6 The scope of the LFS is restricted to people aged 15 years and over and excludes the following:

- members of the permanent defence forces
- certain diplomatic personnel of overseas governments, customarily excluded from census and estimated population counts
- overseas residents in Australia
- members of non-Australian defence forces (and their dependants).

7 In addition the 2004-05 MPHS excluded the following:

- people under the age of 18 years
- people living in private dwellings living in very remote parts of Australia
- people living in non-private dwellings such as hotels, university residences, students at boarding schools, patients in hospitals, residents of homes (e.g. retirement homes, homes for people with disabilities), and inmates of prisons
- visitors to private dwellings.

8 The 2004-05 MPHS was conducted in both urban and rural areas in all states and territories, but excluded people living in very remote parts of Australia. The exclusion of these people will have only a minor impact on any aggregate estimates that are produced for individual states and territories, except the Northern Territory where such people account for around 23% of the population.

COVERAGE

9 In the LFS, coverage rules are applied which aim to ensure that each person is associated with only one dwelling and hence has only one chance of selection in the survey. See **Labour Force, Australia** (cat. no. 6202.0) for more details.

SAMPLE SIZE

10 The initial sample for the MPHS 2004-05 consisted of 18,148 private dwelling households. Of the 15,524 private dwelling households that remained in the survey after sample loss (i.e. households with LFS non-response, no residents in scope for the LFS, vacant or derelict dwellings and dwellings under construction), approximately 86% were fully responding to the MPHS. The number of completed interviews obtained from these private dwelling households (after taking into account the scope, coverage and subsampling exclusions) was 5,880 for the Barriers and Incentives to Labour Force Participation survey and 6,913 for the Retirement and Retirement Intentions survey.

ESTIMATION METHODS

11 Weighting is the process of adjusting results from a sample survey to infer results for the total in scope population. To do this, a 'weight' is allocated to each sample unit, which, for the MPHS, can either be a person or a household. The weight is a value which indicates how many population units are represented by the sample unit. The first step in calculating weights for each unit is to assign an initial weight, which is the inverse of the probability of being selected in the survey. The initial weights are then calibrated to align with independent estimates of the population of interest, referred to as 'benchmarks'. Weights are calibrated against population benchmarks to ensure that the survey estimates conform to the independently estimated distribution of the population rather than the distribution within the sample itself.

12 The survey was benchmarked to the estimated civilian population aged 18 years and over living in private dwellings in each state and territory in non-sparsely settled areas. The process of weighting ensures that the survey estimates conform to person benchmarks by state, part of state, age and sex, and to household benchmarks by state, part of state and household composition. These benchmarks are produced from estimates of the resident population derived independently of the survey.

RELIABILITY OF THE ESTIMATES

13 Estimates in this publication are subject to sampling and non-sampling errors:

- sampling error is the difference between the published estimate and the value that would have been produced if all dwellings had been included in the survey. For more information see the Technical Note.
- non-sampling errors are inaccuracies that occur because of imperfections in reporting by respondents and interviewers, and errors made in coding and processing data. These inaccuracies may occur in any enumeration, whether it be a full count or a sample. Every effort is made to reduce the non-sampling error to a minimum by careful design of questionnaires, intensive training and supervision of interviewers, and effective processing procedures.

CLASSIFICATIONS USED

14 Occupation data are classified according to the ASCO - **Australian Standard Classification of Occupations, Second Edition, 1997** (cat. no. 1220.0).

15 Industry data are classified according to the ANZSIC - **Australian and New Zealand Standard Industrial Classification, 1993** (cat. no. 1292.0).

16 Country of birth data are classified according to the **Standard Australian Classification of Countries (SACC), 1998** (cat. no. 1269.0).

17 Educational attainment data are classified according to the **Australian Standard Classification of Education (ASCED)** (cat. no.1272.0).

AVAILABILITY NOT DETERMINED

18 In the Barriers and Incentives to Labour Force Participation survey, there were 114,500 people who usually worked 0 to 15 hours per week and preferred to work more hours but had not done anything in the four weeks prior to the reference week to obtain more hours of work, for whom availability was not determined. This group of people were not asked when they could start working more hours in those interviews conducted in the non-quarter months (ie September 04, October 04, December 04, January 05, March 05, April 05 and June 05). Information on availability was collected in the LFS in the quarter months and this was used to apportion the 'availability not determined' group to the categories - 'available to start work with more hours and not looking for more hours' and 'not available to start work with more hours and not looking for more hours'. The subset of LFS data used to calculate the proportions matched the scope of the MPHS, and where there were duplicate records across the quarter months, a record was selected at random. The proportions were calculated separately for males and females for each state and territory. These proportions were then applied to the weighted MPHS estimates of people for whom availability was not determined.

COMPARABILITY WITH MONTHLY LFS STATISTICS

19 Due to differences in the scope and sample size of the MPHS and that of the LFS, the estimation procedure may lead to some variations between labour force estimates from this survey and those from the LFS.

PREVIOUS SURVEYS

20 The Barriers and Incentives to Labour Force Participation survey was conducted for the first time in 2004-05, while the Retirement and Retirement Intentions was last conducted in 1997, see **Retirement and Retirement Intentions, Australia** (cat. no. 6238.0).

21 The topic Barriers and Incentives to Labour Force Participation is designed to bring various aspects of factors which influence participation into one data source for comparison. The related supplementary surveys of **Persons Not in the Labour Force, Australia** (cat. no. 6220.0), **Underemployed Workers, Australia** (cat. no. 6265.0) and **Job Search Experience, Australia** (cat. no. 6222.0) offer more detailed information on the various populations.

22 Since the 1997 issue of **Retirement and Retirement Intentions, Australia** (cat. no. 6238.0) there have been conceptual changes which affect time series comparisons. For instance, in the current issue 'retired from the labour force' is defined as 'persons who had previously worked for two weeks or more and had retired from work or looking for work, and did not intend to look for, or take up, work at any time in the future'. In the 1997 issue, this concept was defined as 'persons who had retired from work or looking for work of more than 10 hours per week, and did not intend to work in the future'. These people are considered fully retired. Persons who have never worked more than 10 hours were also treated as fully retired'. Due to such conceptual changes, users should exercise caution when comparing estimates with previous surveys.

NEXT SURVEY

23 The ABS is planning to conduct the 2004-05 topics again during the 2006-07 financial year and two-yearly thereafter. The topics included in the 2005-06 MPHS are:

- Work related injuries
- Household use of information technology
- Participation in sport and physical activity
- Attendance at selected culture and leisure venues and events.

ACKNOWLEDGMENT

24 ABS publications draw extensively on information provided freely by individuals, businesses, governments and other organisations. Their continued cooperation is very much appreciated: without it, the wide range of statistics published by the ABS would not be available. Information received by the ABS is treated in strict confidence as required by the **Census and Statistics Act 1905**.

RELATED PUBLICATIONS

25 ABS publications which may also be of interest include:

- **Australian Labour Market Statistics** (cat. no. 6105.0)
- **Job Search Experience, Australia** (cat. no. 6222.0)
- **Underemployed Workers, Australia** (cat. no. 6265.0)
- **Persons Not in the Labour Force, Australia** (cat. no. 6220.0)
- **Superannuation, Australia** (cat. no. 6319.0)
- **Labour Force, Australia** (cat. no. 6202.0)
- **Employment Arrangements and Superannuation, Australia** (cat. no. 6361.0)
- **Labour Statistics: Concepts, Sources and Methods** (cat. no. 6102.0.55.001)
- **Household Use of Information Technology** (cat. no. 8146.0)

26 Current publications and other products released by the ABS are listed in the **Catalogue of Publications and Products** (cat. no. 1101.0). The Catalogue is available from any ABS office or the ABS web site. The ABS also issues a daily Release Advice on the web site which details products to be released in the week ahead.

Glossary

GLOSSARY

Actively looking for work

Persons who were taking active steps to find work. Active steps comprise:

- registering with a Job Network employment agency
- contacting an employment agency
- contacting prospective employers
- answering a newspaper advertisement for a job
- checking Centrelink touchscreens
- checking factory notice boards
- advertising or tendering for work

Annuities

A series or stream of payments made at regular intervals, usually purchased with a lump sum from a life insurance company, typically to provide retirement income.

Available to start work

For persons not in the labour force, those who were available to start work in the reference week or within four weeks.

Available to start work with more hours

Employed persons who usually worked 0 to 15 hours per week in all jobs and were available to start work with more hours in the reference week or within four weeks.

Current job

The job in which a person currently works.

Did not prefer to work more hours

People who said 'no' or 'don't know' when asked 'would you prefer to work more hours than you usually work?'.

Duration of current main job/last job

Length of time worked in current main job/last job.

Educational attainment

Level of highest educational attainment identifies the highest achievement a person has attained in any area of study. It is defined as the highest educational attainment a person

has achieved, and is not a measurement of relative importance of different fields of study.

Employed

Persons who, during the reference week:

- worked for one hour or more for pay, profit, commission or payment in kind in a job or business, or on a farm (comprising employees, employers and own account workers); or
- worked for one hour or more without pay in a family business or on a farm (i.e. contributing family workers); or
- were employees who had a job but were not at work and were:
 - away from work for less than four weeks up to the end of the reference week; or
 - away from work for more than four weeks up to the end of the reference week and received pay for some or all of the four week period to the end of the reference week; or
 - away from work as a standard work or shift arrangement; or
 - on strike or locked out; or
 - on workers' compensation and expected to return to their job; or
- were employers or own account workers who had a job, business or farm, but were not at work.

Employees (excluding OMIEs) with paid leave entitlements

Employees excluding Owner Managers of Incorporated Enterprises (OMIEs), who were entitled to either paid sick leave or paid holiday leave (or both).

Employees (excluding OMIEs) without paid leave entitlements

Employees excluding OMIEs, who were not entitled to, or did not know whether they were entitled to, paid sick and paid holiday leave.

Employment types

Classification of employed persons according to the following employment type categories on the basis of their main job (that is, the job in which they usually work the most hours):

Employee (excluding owner-manager of incorporated enterprise)

- with paid leave entitlements
- without paid leave entitlements

Owner manager

- owner managers of incorporated enterprises

- owner managers of unincorporated enterprises

Contributing family worker

Family

Two or more persons, one of whom is at least 15 years of age, who are related by blood, marriage (registered or de facto), adoption, step or fostering; and who are usually resident in the same household. The basis of a family is formed by identifying the presence of a couple relationship, lone parent-child relationship or other blood relationship. Some households will, therefore, contain more than one family.

Full-time educational attendance

Persons aged 15-19 who, during the reference week were enrolled full-time at secondary or high schools, and those aged 15-24 who, during the reference week, were enrolled full-time at a Technical and Further Education (TAFE) college, university, or other tertiary educational institution.

Full-time workers (usual)

Employed persons who usually worked 35 hours or more a week (in all jobs).

Future starters

Persons who were not employed during the reference week, were waiting to start a job within four weeks from the end of the reference week, and could have started in the reference week if the job had been available then.

Government pension/allowance

Income support payments from government to persons under social security and related government programs. Included are pensions and allowances received by aged, disabled, unemployed and sick persons, families and children, veterans and their survivors, and study allowances for students. Payments made by overseas governments as well as the Australian government are included.

Gross income

Regular and recurring cash receipts including monies received from wages and salaries, government pensions and allowances, and other regular receipts such as superannuation, workers' compensation, child support, scholarships, profit or loss from own unincorporated business or partnership, and property income. Gross income is the sum of current income

from all these sources before income tax or the Medicare levy have been deducted.

Group jack-knife method

This method of calculating standard errors starts by dividing the survey sample into a number of approximately equal-sized groups (replicate groups). Replicate estimates of the population total are then calculated from the sample by excluding each replicate group in turn. The jack-knife variance is derived from the variation of the respective replicate estimates around the estimate based on the whole sample.

Has ever worked for two weeks or more

Persons who are not in the labour force or are unemployed and have previously worked for two weeks or more.

Incorporated enterprise

An enterprise which is registered as a separate legal entity to its members or owners. Also known as a limited liability company.

Industry

All occurrences of industry refer to Division, as classified by the **Australian and New Zealand Standard Industrial Classification** (ANZSIC), 1993 (cat. no. 1292.0).

Intends to partially retire

Full-time workers who indicated that they intend to give up full-time work and work part-time but never retire from the work force.

Intends to retire from full-time work

Employed persons who indicated that they intend to give up working full-time and partially retire and/or retire from the labour force. This concept has changed since the 1997 issue of this publication - previously defined as 'those persons who indicated that they intend to give up working or looking for full-time work'.

Intends to retire from the labour force

Those persons who indicated that they intend to give up all labour force activity, that is working or looking for work.

Labour Force

The civilian population can be split into two mutually exclusive groups: the labour force (employed and unemployed persons) and persons not in the labour force.

Last job

Refers to last job less than 20 years ago.

Looking for work with more hours

Refers to persons who indicated that they had done something in the last four weeks to obtain more hours of work.

Main English-speaking countries

Comprises the United Kingdom, Ireland, Canada, South Africa, the United States of America and New Zealand.

Main job

The job in which most hours were usually worked.

Non-school qualification

Non-school qualifications are awarded for educational attainments other than those of pre-primary, primary or secondary education. They include qualifications at the Post Graduate Degree Level, Master Degree Level, Graduate Diploma and Graduate Certificate Level, Bachelor Degree Level, Advanced Diploma and Diploma level, and Certificates I, II, III and IV levels. Non-school qualifications may be attained concurrently with school qualifications.

Not employed

Persons who are either unemployed or not in the labour force.

Not retired from the labour force

People aged 45 years and over who have, at some time, worked for two weeks or more and were not retired from the labour force. That is, either employed or intending to look for, or take up, work in the future.

Occupation

All occurrences of occupation in this publication refer to Major Group as defined by ASCO - **Australian Standard Classification of Occupations**, Second Edition (cat. no. 1220.0).

Owner managers

Persons who work in their own business, with or without employees, whether or not the business is of limited liability.

Owner managers of incorporated enterprises

Persons who work in their own unincorporated enterprise, that is, a business entity which is registered as a separate legal entity to its members or owners (also known as a limited liability company).

Owner managers of unincorporated enterprises

Persons who operate their own unincorporated enterprise, that is, a business entity in which the owner and the business are legally inseparable, so that the owner is liable for any business debts that are incurred. Includes those engaged independently in a trade or profession.

Part-time workers (usual)

Employed persons who usually worked less than 35 hours a week (in all jobs).

Permanently not intending to work

Persons who said that they were permanently not intending to work.

Persons in the labour force

Persons who were classified as being in the labour force, that is, either employed or unemployed.

Persons not in the labour force

Persons who were not in the categories 'employed' or 'unemployed' as defined.

Preferred to work more hours

Employed persons who usually work 0 to 15 hours each week and would prefer to work more hours than they usually work.

Previous job

Persons who are not in the labour force or are unemployed, who have previously worked for two weeks or more, less than 20 years ago.

Reference week

The week preceding the week in which the interview was conducted.

Relationship in household

The relationship of people who live in the same household.

Retired from the labour force

Persons who had previously worked for two weeks or more and had retired from work or looking for work, and did not intend to look for, or take up, work in the future. This concept has changed since the 1997 issue - previously 'persons who had retired from work or looking for work of more than 10 hours per week, and did not intend to work at any time in the future. These people are considered fully retired. Persons who have never worked more than 10 hours per week were also treated as fully retired'.

Retirement scheme

Includes superannuation schemes, life assurance policies or similar schemes that provide financial benefit when a person leaves work.

Status in employment

Employed persons classified by whether they were employees, employers, own account workers, or contributing family workers.

Superannuation scheme

Any fund, association or organisation set up for the purpose of providing financial cover for members when they retire from work. For this survey, information about superannuation scheme membership was collected if the respondent indicated that contributions had been made to a scheme. Contributions could either have been made by the respondent, the respondent's partner or the respondent's employer.

Time since last job

The elapsed time since ceasing last job.

Took inactive steps

People who did not take active steps to look for work (see actively looking for work). Includes only looked in newspapers.

Unemployed

Persons who were not employed during the reference week, and:

- had actively looked for full-time or part-time work at any time in the four weeks up to the end of the reference week and were available for work in the reference week; or
- were waiting to start a new job within four weeks from the end of the reference week and could have started in the reference week if the job had been available then.

Unincorporated enterprise

A business entity in which the owner and the business are legally inseparable, so that the owner is liable for any business debts that are incurred.

Unpaid activities

Includes caring for own children or other people's children including grandchildren. Also includes caring for elderly or someone with long-term illness or disability.

Usual number of hours

The number of hours usually worked in a week in all jobs.

Would like a paid job

Persons who are not in the labour force and would like a paid job of any kind. Includes people who said 'depends'.

Would like more hours

See 'preferred to work more hours'.

Would not like a paid job

Persons who were not classified as employed or unemployed who answered 'no' or don't know when asked if they would like a paid job.

Abbreviations

The following symbols and abbreviations are used in this publication:

'000	thousand
ABS	Australian Bureau of Statistics
ANZSIC	Australian and New Zealand Standard Industrial Classification
ASCED	Australian Standard Classification of Education
ASCO	Australian Standard Classification of Occupations
Aust.	Australia
CAI	computer assisted interviewing
CURF	Confidentialised Unit Record File
LFS	Labour Force Survey
MPHS	Multi-Purpose Household Survey
MPS	Monthly Population Survey
n.f.d.	not further defined
NILF	not in the labour force
OMIE	owner manager of incorporated enterprise
RSE	relative standard error
SACC	Standard Australian Classification of Countries
SE	standard error
TAFE	Technical and Further Education

Appendix

APPENDIX POPULATIONS AND DATA ITEM LIST

DATA AVAILABLE ON REQUEST

The ABS has a range of data available on request from the labour topics of the Multi-Purpose Household Survey (MPHS), that is, **Barriers and Incentives to Labour Force Participation, Australia** (cat. no. 6239.0) and **Retirement and Retirement Intentions, Australia** (cat. no. 6238.0). More detailed breakdowns of some data items may also be available on request.

The population(s) for a particular data item refer to the persons in the survey to whom the data item relates. Where alternative output categories are available for the same data item, these are shown and the data item name is followed by a bracketed numeral (e.g. Country of birth (2)).

For information about ABS data available on request, contact the Labour Market Statistics Section on Canberra (02) 6252 7206.

BARRIERS AND INCENTIVES TO LABOUR FORCE PARTICIPATION

Population 1: All persons aged 18 years and over.

Population 2: Employed persons.

Population 3: Unemployed persons.

Persons not in the labour force

Population 4: Persons not in the labour force.

Population 5: Persons who would like a paid job.

Population 6: Persons who would like a paid job but are not available start within four weeks.

Population 7: Persons who would like a paid job but are not actively looking for a job.

Population 8: Persons who would not like a paid job or did not know.

Employed persons who usually work 0 to 15 hours per week in all jobs

Population 9: Persons who usually work 0 to 15 hours per week in all jobs.

Population 10: Persons who would prefer to work more hours.

Population 11: Persons who would prefer to work more hours but are not available to start within four weeks.

Population 12: Persons who would prefer to work more hours but are not looking for work with more hours.

Population 13: Persons who would not prefer to work more hours.

RETIREMENT AND RETIREMENT INTENTIONS

Population 14: Persons aged 45 years and over.

Population 15: Persons aged 45 years and over who have worked, at some time, for two weeks or more.

Population 16: Persons in the labour force aged 45 years and over.

Population 17: Employed persons aged 45 years and over.

Population 18: Persons not in the labour force aged 45 years and over.

Population 19: Persons aged 45 years and over who have retired from the labour force.

Population 20: Persons aged 45 years and over who have worked, at some time, for two weeks or more, and are not retired from the labour force.

Population 21: Persons aged 45 years and over who intend to retire from the labour force.

The 'Populations and data items list' Data Cube contains the list of data items available from the 2004-05 MPHS and can be accessed through the 'Details' tab.

Data Quality (Technical Note)

TECHNICAL NOTE DATA QUALITY

INTRODUCTION

1 Since the estimates published in **Retirement and Retirement Intentions, Australia**, (cat. no. 6238.0) are based on information obtained from occupants of a sample of dwellings, they are subject to sampling variability. That is, they may differ from those estimates that would have been produced if all dwellings had been included in the survey. One measure of the likely difference is given by the standard error (SE), which indicates the extent to which an estimate might have varied by chance because only a sample of dwellings was included. There are about two chances in three (67%) that a sample estimate will differ by less than one SE from the number that would have been obtained if all dwellings had been included, and about 19 chances in 20 (95%) that the difference will be less than two SEs. Another measure of the likely difference is the relative standard error (RSE), which is obtained by expressing the SE as a percentage of the estimate.

2 In general, the size of the SE increases as the size of the estimate increases. Conversely,

the RSE decreases as the size of the estimate increases. Very small estimates are thus subject to such high RSEs that their value for most practical purposes is unreliable. In the tables in this publication, only estimates with RSEs of 25% or less are considered reliable for most purposes. Estimates with RSEs greater than 25% but less than or equal to 50% are preceded by an asterisk (e.g. *3.4) to indicate they are subject to high SEs and should be used with caution. Estimates with RSEs of greater than 50%, preceded by a double asterisk (e.g. **0.3), are considered too unreliable for general use and should only be used to aggregate with other estimates to provide derived estimates with RSEs of less than 25%.

CALCULATION OF STANDARD ERROR AND RELATIVE STANDARD ERROR

3 RSEs for all tables are provided. The RSEs have been derived using the group jack-knife method. SEs can be calculated using the estimates (counts or means) and the corresponding RSEs.

4 An example of the calculation of the SE from an RSE follows. Table 2.1 shows that the estimated number of females aged 45-49 who retired from the labour force aged less than 45 years is 48,700. The corresponding RSE table for 2.1 shows that the RSE for this estimate is 17.6%. The SE is:

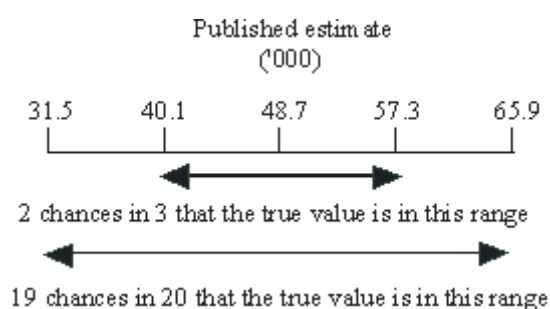
SE of estimate

= (RSE / 100) x estimate

= 0.176 x 48700

= 8,600 (rounded to the nearest 100)

5 Therefore, there are about two chances in three that the value that would have been produced if all dwellings had been included in the survey will fall within the range 40,100 to 57,300 and about 19 chances in 20 that the value will fall within the range 31,500 to 65,900. This example is illustrated in the diagram below.



Proportions and percentages

6 Proportions and percentages formed from the ratio of two estimates are also subject to sampling errors. The size of the error depends on the accuracy of both the numerator and the denominator. A formula to approximate the RSE of a proportion is given below. This

formula is only valid when x is a subset of y.

$$RSE\left(\frac{x}{y}\right) = \sqrt{[RSE(x)]^2 - [RSE(y)]^2}$$

7 Considering Table 2.1, of the 1,687,700 females who were retired from the labour force, 551,700 or 32.7% were aged less than 45 years at retirement. The RSE of 551,700 is 4.5% and the RSE for 1,687,700 is 1.6% (as shown in the corresponding RSE table for 2.1). Applying the above formula, the RSE for the proportion of females who did not prefer to work more hours is:

$$RSE = \sqrt{(4.5)^2 - (1.6)^2} = 4.2\%$$

8 Therefore, the SE for the proportion of females aged 45-49 who retired from the labour force aged less than 45 years is 1.4 percentage points $(=(32.7/100) \times 4.2)$. Therefore, there are about two chances in three that the proportion of females aged 45-49 who retired from the labour force aged less than 45 years is between 31.3% and 34.1%, and 19 chances in 20 that the proportion is within the range 29.9% to 35.5%.

Sums or Differences between estimates

9 Published estimates may also be used to calculate the sum of, or difference between, two survey estimates (of numbers, means or percentages). Such estimates are also subject to sampling error.

10 The sampling error of the difference between two estimates depends on their SEs and the relationship (correlation) between them. An approximate SE of the difference between two estimates (x-y) may be calculated by the following formula:

$$SE(x-y) = \sqrt{[SE(x)]^2 + [SE(y)]^2}$$

11 The sampling error of the sum of two estimates is calculated in a similar way. An approximate SE of the sum of two estimates (x + y) may be calculated by the following formula:

$$SE(x+y) = \sqrt{[SE(x)]^2 + [SE(y)]^2}$$

12 An example follows. From paragraph 4 the estimated number of females aged 45-49 who retired from the labour force aged less than 45 years is 48,700 and the SE is 8,600. From Table 2.1, the estimate of females aged 50-54 who retired from the labour force aged less than 45 years old is 63,900 and the SE is 8,200. The estimate of females aged 45-54 who retired from the labour force aged less than 45 years is:

$$48,700 + 63,900 = 112,600$$

13 The SE of the estimate of females aged 45-54 who retired from the labour force aged less than 45 years is:

$$SE = \sqrt{(8,600)^2 + (8,200)^2}$$

= 11,900 (rounded to the nearest 100)

14 Therefore, there are about two chances in three that the value that would have been produced if all dwellings had been included in the survey will fall within the range 100,700 to 124,500 and about 19 chances in 20 that the value will fall within the range 88,800 to 136,400.

15 While these formulae will only be exact for sums of, or differences between, separate and uncorrelated characteristics or subpopulations, it is expected to provide a good approximation for all sums or differences likely to be of interest in this publication.